

Patent Claims

1. A circuit arrangement for protecting integrated
5 semiconductor circuits from electrical pulses or
electrical overvoltages, said circuit arrangement
having
 - an RC element which comprises a first resistor
(R1; R10) and a capacitance (C1; C10) and is
10 connected between two supply potential lines (VDD,
VSS),
 - a chain of inverters (I10 - I12) which are
connected in series, the input of said chain being
connected to the junction point between the first
15 resistor (R1; R10) and the capacitance (C1; C10),
and
 - having a protection transistor (ST) whose control
input is connected to the output of the inverter
chain and whose outputs are connected to the two
20 supply potential lines (VDD, VSS), characterized
in that
the junction points between the inverters (I10 -
I12) and between the inverters and the protection
transistor (ST) are each connected to a resistor
25 (R11, R12, R13), with the respective other
connection of the resistors being connected to one
of the supply potential lines (VDD, VSS).
2. The circuit arrangement as claimed in claim 1,
30 characterized in that
the resistors are alternately connected to each of
the supply potential lines (VDD, VSS).
3. The circuit arrangement as claimed in claim 1 or
35 2, characterized in that
the input of the last inverter (I12) in the
inverter chain is connected to one supply

potential line (VDD) via one of the resistors (R11), and the output of the last inverter (I12) in the inverter chain is connected to the other supply potential line (VSS) via another one of the resistors (R12) and is connected to the control input of the protection transistor (ST).

4. The circuit arrangement as claimed in one of claims 1 to 3, characterized in that the inverters are in the form of CMOS inverters (P10, N10; P11, N11; P12, N12).

5. The circuit arrangement as claimed in one of claims 1 to 4, characterized in that the resistors are in the form of diffusion resistances.

6. The circuit arrangement as claimed in one of claims 1 to 5, characterized in that the first resistor (R10) is a diffusion resistance.

7. The circuit arrangement as claimed in one of claims 1 to 6, characterized in that the capacitance (C1; C10) is an oxide capacitance.